Quality Control During the Interview Process

General Approach to Personal Interviewing

Westat uses a variety of methods throughout the field period to establish the study's legitimacy, gain respondent cooperation, and thus ensure acceptable high-response rates. These methods include introductory letters to the respondents that explain the purpose of the study and the importance of the respondent's participation, professional interviewing on site, and interview monitoring by supervisory staff.

Introductory Letters

Westat designs introductory letters to respondents for in-person surveys and sends them to the respondents prior to contact for field surveys. Westat follows several basic principles when developing these letters.

- The letter is written in simple, easy-to-understand language.
- If possible, the letter is addressed personally to each respondent.
- The letter explains the purpose of the study and who is sponsoring the research.
- An explanation is given of how the respondent was selected. If the respondent was selected from the general population, Westat explains how his or her experiences will represent the thousands of others whom it cannot interview, thus clarifying the importance of the respondent's participation.
- An assurance of confidentiality is included and emphasized.
- A contact name and number is included for the person to call for further explanation.
- The letter is signed by the principal investigator for the project, or in some cases, by the contact person at the collaborating institution.

Westat also takes responsibility for the design of letters that go to physicians asking for permission to contact a subject or followup information. The general principles just cited also apply in writing these letters. The letters simply state the purpose of the study and the purpose of the contact. Assurance of confidentiality is included and a contact name and number is included if necessary. Again, these letters are signed by the principal investigator or someone at the collaborating institution.

Initial In-Person Contact

Following the introductory letter an interviewer calls the respondent. The interviewer can answer any questions the respondent might have. At this time the interviewer establishes rapport with the respondent, obtains verbal consent for the interview, and sets up an appointment for the in-person interview.

Westat interviewers carry corporate identification and study materials when they arrive at each interview. These items include a Westat ID badge, an introductory letter, and a study brochure if one is being used in the survey. Respondents will feel at ease during in-person interviews because Westat has had extensive experience interviewing respondents in a variety of settings – their homes, hospitals or clinics, and other sites specific to a study.

Once the interviewer arrives at the respondent's site at the scheduled time, he or she will again explain the study and its goals, which is critical in establishing the legitimacy of the study to the respondent. The interviewer will then ask the respondent to sign an informed consent form and the interview will begin.

Monitoring In-Person Interviews

Interviewers are monitored by the field supervisor who also meets with them weekly. During these meetings the supervisor answers any interviewer questions, reviews work previously edited by supervisory staff, discusses rates of production, and prepares new assignments. In addition to these meetings, telephone contact is also maintained, as both the interviewer and the supervisor consider necessary.

The field supervisor also reports regularly to the study manager. A status report and logs are sent to Westat. Westat enters the data into a computerized management information system and generates progress reports. These reports are reviewed by the study manager with the field supervisor.

QC Procedures for Hiring

One of the first steps in ensuring high-quality work is to carefully screen applicants for data collection positions. A review of the applicant's experience, reference checks, telephone screening, and when possible, an in-person interview with each candidate, enable Westat to hire successful data collectors. To assist us in this process, we maintain a computerized data file of interviewers, abstractors, tracers, and other field workers who have worked on previous assignments for Westat. Westat's Telephone Research Center (TRC) maintains a telephone interviewer management system with records of more than 2,700 telephone interviewers who have worked for Westat during the past 5 years. These files contain performance evaluations to aid in the selection of qualified candidates.

Westat will use the following techniques to ensure that the process of hiring data collection staff yields the best candidate possible:

- If a candidate has worked on previous Westat studies, the candidate's former Westat supervisor will be contacted for an evaluation of the candidate's performance. Reference checks will also be conducted for each candidate we are considering.
- All candidates will be required to complete a standardized form requesting detailed information about their educational and work histories, their specific data collection experience, references, and availability.
- When feasible, personal interviews will be conducted with each candidate. If we are hiring interviewers, they will be asked to administer a standardized practice interview so that we can judge their reading abilities, pacing, and voice quality.
- Finally, each data collector will receive formal training for each study. If performance during this training session is inadequate, data collectors will be retained or dismissed before starting work on the study. New staff also will be

subject to a 30-day probationary period when they begin work on a study. If performance during the probationary periods is inadequate, data collectors will be retained or dismissed.

QC for Training

To ensure high-quality work, Westat will invest a considerable amount of time and effort in the development of training materials and in training the data collection staff. The project team, other senior Westat staff, and the EPA work assignment managers will carefully review all materials. Summarized below are the quality control methods that we will routinely follow in our training sessions.

- **Practical Exercises.** Each training session will provide the trainees with first-hand experience in the data collection activity for which they are being trained. Abstractors will abstract sample source documents, interviewers will conduct mock interviews, etc.

- **Observation and Evaluation of Trainees.** During the training period, Westat staff will observe and evaluate trainees. Trainers will meet daily after the training session for that day to assess the performance of each trainee. Trainees who are having difficulty will be given special assistance and additional training, as needed. The supervisor will monitor the final training interview and first actual interview, particularly for telephone interviewers and sometimes for field interviewers. Continued periodic monitoring during the course of data collection will be an ongoing quality control check on the work performed.

- **Multiple Trainers.** The ratio of trainers to trainees will be such that individual attention can be given to trainees.

- **Retaining.** Training for replacement staff hired because of staff attrition and remedial training for staff not meeting data collection performance standards will replicate the original training to the extent possible.

QC of Interviews

Westat typically checks 10 percent of the completed interviews on a random basis by interviewer and by interview to insure that interviews were conducted. Westat will call the respondent to verify that the interview was conducted. The Oklahoma study may check 50 percent of completed interviews.

Data Preparation and Processing

Westat has extensive experience in coding, keying, and cleaning data from large health surveys and other surveys. For many studies we conduct all data preparation activities, which include:

§ Development of the record layout for the survey data;
§ Selection of coding schemes for special items, such as industries, occupations and diseases;
§ Development of a codebook corresponding to the data collection instrument;
§ Manual review of data collection instruments to identify errors, code open-ended and other-specify responses, and read marginal note that may affect coding.
§ Data retrieval by contacting respondents to obtain missing key items (not for Oklahoma);
§ Data entry of the data collection instrument responses into machine-readable form;
§ Double keying of data for paper questionnaires;
§ Computer editing of the data for allowable codes and consistency among items; and
§ Delivery of a final data set containing the cleaned data.

There are several tools that Westat Data Managers use to assist in this, CO/ED, Cheshire, Blaise, and PC-based various software packages. The ones with which you will be involved depend upon your study assignment. This section will give you an overview of CO/ED, Cheshire and Blaise.

CO/ED

The CO/ED System (COdebook/EDit) is an integrated collection of software that operates interactively or in batch mode in a variety of hardware and operating system environments. This system provides several capabilities, including codebook development, generation of machine edit programs, and generation of SAS and SPSS program code. This system has been in place and operating successfully for more than 15 years and has been significantly upgraded during this period, most recently to run in a PC environment in addition to its traditional mainframe environment. A primary design feature of this software is the centralized management of a data dictionary, called the source file, for all data collection instruments for the study, so that data items definitions can be changed in one place at one time and the machine edits and analysis format (SAS and/or SPSS) conversions can be automatically regenerated.

CO/ED is a proprietary software system that was developed to facilitate and standardize the processing of survey data. The system is written in COBOL and PL/I, and supports its own "language" for the description of survey instruments. It is menu-driven, and has the ability to:

§ Describe a form's acceptable responses and logical interrelationships (the CO/ED source code);

- Define a unique location in a data file for each piece of data and for each participant in the study (column-designated file layout);
- Print editing instructions for data editing/cleaning personnel (machine edit specifications);
- Generate a COBOL program for each form for each study used to edit the data for logical consistency and to make data updates easily (machine edit program);
- Generate program code in SAS or SPSS for data analysis; and
- Produce client-ready final documentation (marginal frequencies).

Editing and Correcting Computer Files

After data are keyed and verified, they are edited against an exhaustive set of machine edit specifications that fall into two categories: range checks and logic checks. Range checks ensure that individual data items contain acceptable codes. Logic checks ensure that related data items are answered consistently. Together, range and logic checks are applied to edit the data to produce a clean data file. However, Westat has found it beneficial to produce and review frequency distributions for all data items as a final step in the machine editing process.

Westat uses proprietary software to facilitate the data preparation and machine editing process; we refer to this as a codebook/machine edit (CO/ED) system. The CO/ED language was developed by Westat to produce a codebook; it is also used to produce a COBOL machine edit program and a SAS or SPSS analysis program. The CO/ED package allows the Data Manager to enter simple data records that specify variable names, lengths of fields, type of data, variable location, allowable codes, skip instructions, and inapplicable definitions. These records are processed and checked by the COED software, that checks them for logical errors to aid the Data Manager in debugging the CO/ED source code for a survey instrument.

Computer-Assisted Interviewing (CAI) Systems

Currently, Westat regularly uses two major CAI systems, Cheshire and Blaise. Westat actively monitors and evaluates computer-assisted interview (CAI) technology (such as CASES) for their potential in project use.

Cheshire is Westat's proprietary CAI system supporting computer-assisted telephone interviewing (CATI), computer-assisted personal interviewing (CAPI), and computer-assisted data entry (CADE). Cheshire offers an integrated set of capabilities that includes questionnaire authoring, efficient data capture and online editing, powerful interviewing features such as dynamic lists (rosters), form-based questions, automated consistency checks, skip pattern logic checks, nondestructive backup, online context-sensitive interviewer help, external directory and coding lookup, keystroke audit trails, and other features. The system is based on an architecture that includes a data dictionary, a screen library, development and debugging tools and procedures, and various supporting utilities.

Blaise is a commercial CAI system developed by Statistics Netherlands and used worldwide for a variety of survey applications. Westat is the distributor of Blaise in the United States and Canada. Blaise is used for computer-assisted personal interviewing (CAPI), computer-assisted telephone interviewing (CATI), and computer-assisted self-interviewing (CASI). It supports structured questionnaire designs, complex routing and checking, interactive data entering, top-down editing with interactive tables, and forms-based data entry. Blaise allows an unlimited number of questions and records and provides tools for survey management, data manipulation and tabulation, interactive coding, and the export of data to statistical packages.

Overview of Platforms

Most Westat Data Managers are trained to use CO/ED, which is currently installed on Westat's VAX at the Rockville campus and at NIH/CIT (referred to as CIT). Recently a PC-based system has also been implemented called COED++.

You will have a PC that can be used to access CO/ED on the VAX, CIT and the PC-based system as well as being connected to the Westat network where you will be able to use Microsoft Access, Excel, Outlook e-mail, and other word-processing software.

Basic Office Automation (BOA) provides professional and support staff with training and support in word processing, spreadsheet programs, file management programs, and other standard software throughout the company. The group trains new staff and conducts a routine monthly calendar of more than 30 classes, and also conducts on-site seminars and one-on-one tutorials. A copy of the most current BOA Newsletter follows this section.

The **PC HelpDesk** is a central point of contact for Westat employees who require assistance with office automation software, who are experiencing problems with their PCs and PC-related equipment, or who need to obtain computer-related supplies or documentation. The BOA unit and the PC HelpDesk are valuable corporate resources that allow Westat employees to carry out their computer-related tasks efficiently.

QC Production Monitoring

A part of supervising any project is to continually be aware of where you are in the project with respect to the amount of work accomplished to date, the amount of work to be accomplished and what it will take to complete the project on schedule. This is called production monitoring. To do this, you should be monitoring the "numbers" of each project on a weekly basis (or even more frequently if things are changing). Monitoring the "numbers" includes knowing just how long it takes to accomplish each task, how many of each task needs to be accomplished, and how many people it will take to do this.